



PRELIMINARY REPORT

AIC 23 - 2001

Air Niugini Limited

P2-ANT

Fokker 70

Cabin Pressurization Event In Flight.

Port Moresby

PAPUA NEW GUINEA

20 February 2023



About the AIC

The Accident Investigation Commission (AIC) is an independent statutory agency within Papua New Guinea (PNG). The AIC is governed by a Commission and is entirely separate from the judiciary, transport regulators, policy makers and service providers. The AIC's function is to improve safety and public confidence in the aviation mode of transport through excellence in: independent investigation of aviation accidents and other safety occurrences within the aviation system; safety data recording and analysis; and fostering safety awareness, knowledge and action.

The AIC is responsible for investigating accidents and other transport safety matters involving civil aviation, in PNG, as well as participating in overseas investigations involving PNG registered aircraft. A primary concern is the safety of commercial transport, regarding fare-paying passenger operations.

The AIC performs its functions in accordance with the provisions of the *Papua New Guinea Civil Aviation Act 2000 (as amended)*, and the *Commissions of Inquiry Act 1951* and Annex 13 to the *Convention on International Civil Aviation*.

The object of a safety investigation is to identify and reduce safety-related risk. AIC investigations determine and communicate the safety factors related to the transport safety matter being investigated.

On 22 February 2023 at 14:52 local time (00:05 UTC), the AIC was notified by CASA PNG during an Aviation Safety Briefing an occurrence which had occurred on 20 February 2023 at 16:00 local time involving a Fokker 70 aircraft owned and operated by Air Niugini Limited. The AIC immediately began gathering information pertinent to the occurrence and commenced the investigation. A team of investigators were dispatched to perform on-site activities.

This Preliminary Aircraft Accident Investigation Report was produced by the AIC, and it contains facts known to the AIC before the official release date. It was developed by the Commission in accordance with Para 7.1 of ICAO Annex 13. The report is also published on the AIC website: www.aic.gov.pg

The report is based on the initial investigation carried out by the AIC in accordance with *PNG Civil Aviation Act 2000 (as amended)*, *Chapter 31 of the Commissions of Inquiry Act*, *Annex 13 to the Convention on International Civil Aviation*, and the *PNG AIC Investigation Policy and Procedures Manual*. It contains factual information. Analysis of that information, findings and contributing (causal) factors, other factors, safety actions, and safety recommendations are reserved for the *Final Report*.

The sole objective of the investigation and the Preliminary Report is the AIC's obligation to the *Convention on International Civil Aviation* and in accordance with *ICAO Annex 13*, and thereby promote aviation safety. (Reference: *ICAO Annex 13, Chapter 7*). Readers are advised that in accordance with *Section 219 of the Civil Aviation Act 2000 (as amended)* and *Annex 13*, it is not the purpose of the Commission's aircraft accident investigation to apportion blame or liability. Fact based statements in the report should not be interpreted as apportioning blame. Consequently, AIC reports are confined to matters of safety significance and may be misleading if used for any other purpose.



Captain Aria Bouraga, MBE

Acting Chief Commissioner

22 March 2023

Occurrence details

On 20 February 2023, at about 16:00 local time, (0600 UTC¹), a Fokker 70 aircraft, registered P2-ANT, owned and operated by Air Niugini Limited sustained a severe cabin pressurization during approach into Jacksons International Airport, approximately 20 NM Northwest of Jacksons International Airport, Papua New Guinea.

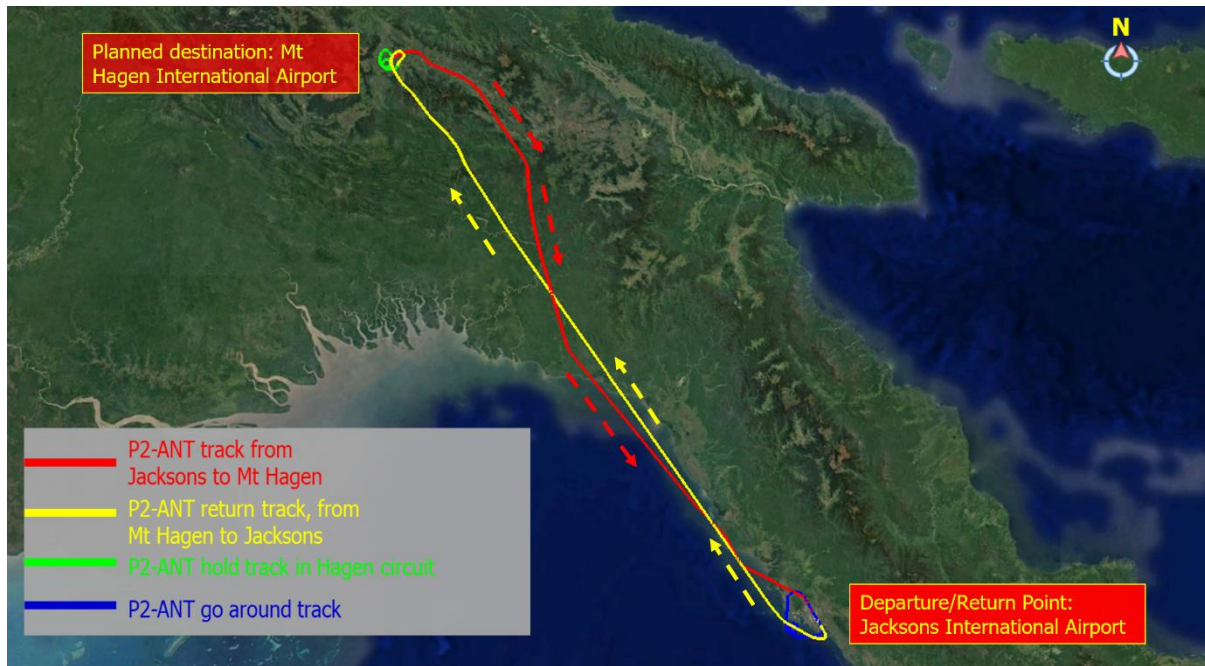


Figure 1: Depiction of occurrence flight path.

There were 71 persons onboard: two pilots, two cabin crew and a total of 67 passengers (including 2 infants).

The co-pilot, occupying the right seat, was pilot flying (PF), and the Pilot in Command (PIC) who was in the left seat was the pilot monitoring (PM).

The flight crew had decided to return to Jacksons after observing that the weather at Mt. Hagen Airport, the planned destination, was not suitable for an approach and landing.

The Flight Data Recorder (FDR) data showed that the aircraft had originally departed from Jacksons Airport at 14:07. The flight crew² stated during interview that they arrived overhead Mt. Hagen Airport at 15:00. The flight crew reported that on approach for landing into Mt. Hagen Airport, they elected to maintain 8,000 feet (ft) above mean sea level (AMSL) and visually hold to the West of the Airfield over the Mount Hagen Township, due to the prevailing wind conditions in the circuit. The hold lasted for about eight minutes.

¹ The 24-hour clock, in Coordinated Universal Time (UTC), is used in this report to describe the local time as specific events occurred. Local time in the area of the serious incident, Papua New Guinea Time (Pacific/Port Moresby Time) is UTC + 10 hours.

² PIC and co-pilot.

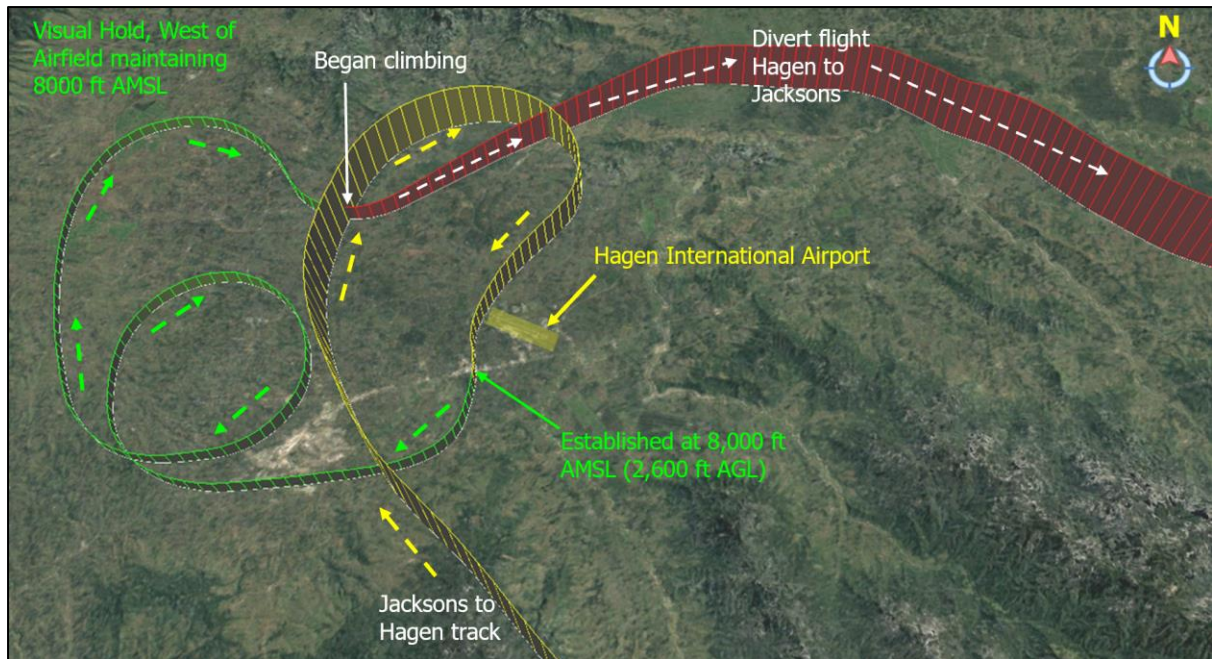


Figure 2: Depiction of the flight path in Mt. Hagen Circuit.

When interviewed, the flight crew stated that, given the local wind conditions observed in the circuit during the hold, a safe landing was not possible, and therefore a decision was made to return to Jacksons Airport. Recorded data showed that the aircraft climbed to a cruising altitude of 31,000 ft AMSL and began tracking back to Jacksons.

About 100 NM³ from Jacksons, the crew commenced their descent. The crew stated that a track deviation of 30 NM right of track was required to keep clear of enroute weather. Approaching 10,000 ft AMSL on descent into Jacksons Airport, the crew actioned the *Fokker 70 Normal Procedures Before Approach Check*. The flight crew stated during interview that they subsequently noticed that the Landing Elevation Setting⁴ had not been set for an arrival into Jacksons but was instead, still maintained at about 5,500 ft, which they initially set for Mt. Hagen Airport.

The crew stated in the interview that since there was a need to increase the rate of pressurizing the cabin on descent, the *Fokker 70 Quick Reference Handbook (QRH) Abnormal Procedures for Manual Cabin Pressurization Control Procedure* was executed, and they continued with the approach for landing into Jacksons Airport via the ILS⁵ procedure for Runway 14L.

The crew stated that once the aircraft was established on final approach for Runway 14L, the cabin pressure differential indicated about 6 PSI⁶. Seeing that the indication was above the maximum allowable cabin differential for landing (0.13 PSI), the crew terminated the approach and initiated a Go Around at about 16:00, from 1,000 ft AGL⁷ straight ahead over Runway 14L.

The aircraft climbed on runway heading to 2,500 ft AGL and requested, for clearance from ATC⁸ to conduct a right hand turn to track and visually hold at 2,500 ft in the Daugo Training Area (D901). ATC provided the clearance as requested by the crew.

³ Nautical miles.

⁴ The difference in Elevation is about 5,300 feet.

⁵ Instrument Landing System.

⁶ Pounds per square inch.

⁷ Above Ground Level

⁸ Air Traffic Control

The aircraft established at established at D901 at 16:06. The crew reportedly actioned the *QRH Abnormal Procedure* for “*Reduced Cabin Pressure Differential Procedure*”. The aircraft then left the hold at D901 and with ATC clearance, tracked for a right base turn at about 16:14. The crew reportedly conducted a normal approach and landed on Runway 14L at 16:20. The crew taxied to the parking bay where the engines were shut down. The engines were shut down at 17:17.

A normal disembarkation procedure was followed, and all passengers disembarked.

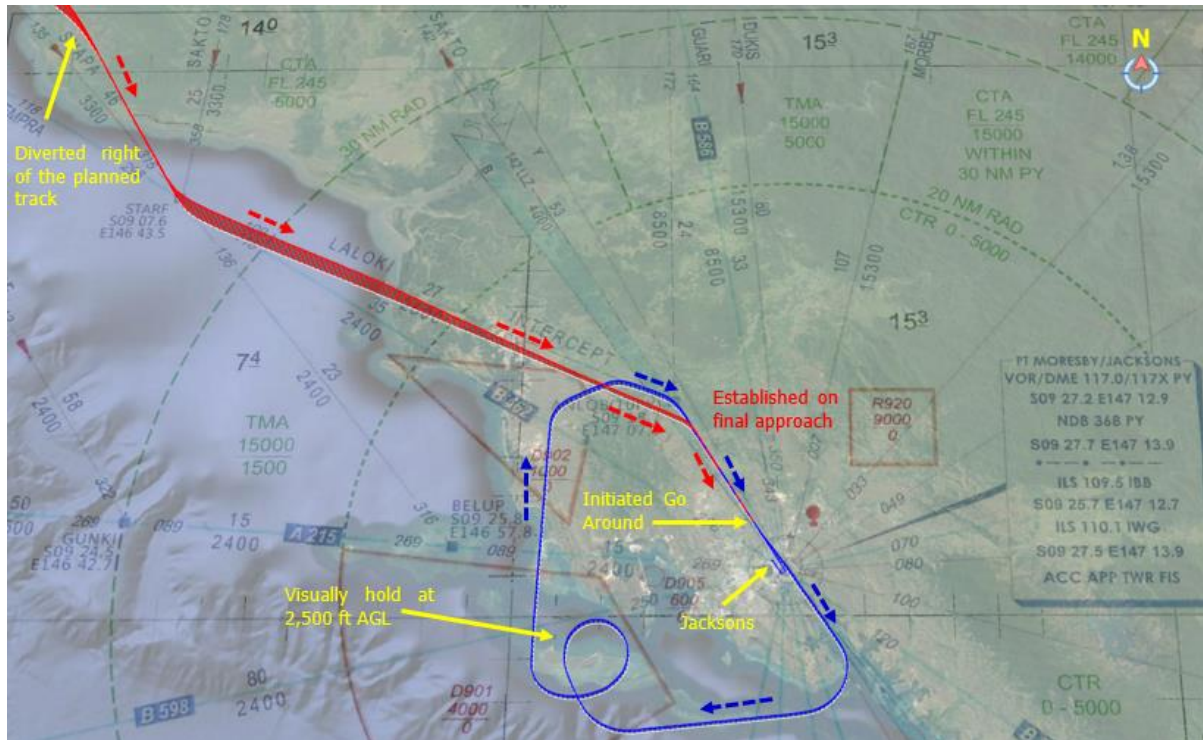


Figure 3: Depiction of the flight path from Go Around to landing.

According to customer services duty officer’s statements provided to the AIC, four passengers were reported to have sustained serious injuries and 18 passengers sustained minor injuries. For all crew and the remaining 45 passengers, no injuries were reported.

The injuries were reported to have been sustained during flight operations Jacksons aerodrome area as a result of a sudden pressurization event.

AIC Comment

The investigation is continuing and will include environmental, operational, organizational, and technical aspects and other areas as applicable.

The investigation analysis and findings will be included in the Final Report.

NOTE: Cockpit Voice Recorder evidence was overwritten and is unavailable due to a significant delay in notifying the AIC and continued operation of the aircraft.

NOTE: For the purpose of this preliminary report, from the flight data recorder:

- time is to the nearest minute.
- Distance is to the nearest nautical mile.
- Altitude is to the nearest hundredth foot.

Safety Actions

At the time of the issue of this Preliminary report, no Safety Actions have been taken.

Recommendations

At the time of the issue of this Preliminary report, no Safety Recommendations have been issued by the AIC.

General Details

Date and time:	20 February 2023, 16:00 local time (06:00 UTC)	
Occurrence category:	Serious Incident.	
Primary occurrence type:	Cabin pressurisation during approach and landing.	
Location:	20 NM Northwest of Jacksons International Airport, Port Moresby	
Type of Operations	Regular Passenger Transport (RTP)	
Persons on board	Flight Crew: 2 Cabin Crew: 2	Passengers: 67
Injuries	Crew: Nil	Passengers: 4 serious injuries 18 minor injuries 45 no injuries
Damages	No damage to aircraft or its related pressurisation systems components.	

Crew details

Flight Crew		
	Captain	First Officer
Gender	Male	Male
Age	33	38
Nationality	Papua New Guinean	Papua New Guinean
Licence type	ATPL (PNG)	CPL (PNG)
Total hours	8,261.60	6,434.10
Total hours in Command	3,811.60	109.70
Total hours on type	3,336.25	4,356.60
Cabin Crew		
	Cabin Crew 1	Cabin Crew 2
Nationality	Papua New Guinean	Papua New Guinean
Age	33	24
Gender	Male	Female
Certificate type	Fokker 70/100, Dash 8 Emergency Procedures	Fokker 70/100, Dash 8 Emergency Procedures

Aircraft Details

Aircraft manufacturer and model:	Fokker, Fokker F28 Mark 0070	
Registration:	P2- ANT	
Serial number:	11577	
Total aircraft hours (since new)	Hours: 46, 483.65	
Engine manufacturer and model	Rolls Roy Tay 620-15	
Engine serial number	Right engine: 17061	Left engine: 17179
Total engine hours (since new)	Right engine hours: 13,363.02	Left engine hours: 38,324.95

